# Item 4.1: CEO Update

*Bill Magness*
President & CEO
ERCOT

Board of Directors Meeting

ERCOT Public
August 9, 2016

# CEO Update: Variance to Budget ($ in Millions)
# Net Revenues After Department Expenditures

**Net Revenues Year to Date Actuals: $4.9 M Favorable** *(as of June 30, 2016)*

**Major Revenue Variances**

$2.5 M under budget: system administration fees unfavorable due to milder-than-expected weather

**Major Expenditure Variances**

$2.6 M under budget: resource management ($1.5 M staffing management; $1.1 M project work)

$0.9 M under budget: employee health costs

$0.5 M under budget: interest expense due to project funding; interest income due to higher rates

$2.6 M under budget: timing differences

**Net Revenues Year End Forecast: $7.5 M Favorable** *(as of July 28, 2016)*

**Major Revenue Variances**

$0.5 M over budget: system administration fees favorable based on current actuals and load forecast for remainder of year

**Major Expenditure Variances**

$4.6 M under budget: resource management ($3.1 M staffing management; $1.5 M project work)

$1.4 M under budget: interest expense due to project funding and no revolver usage; interest income due to higher rates

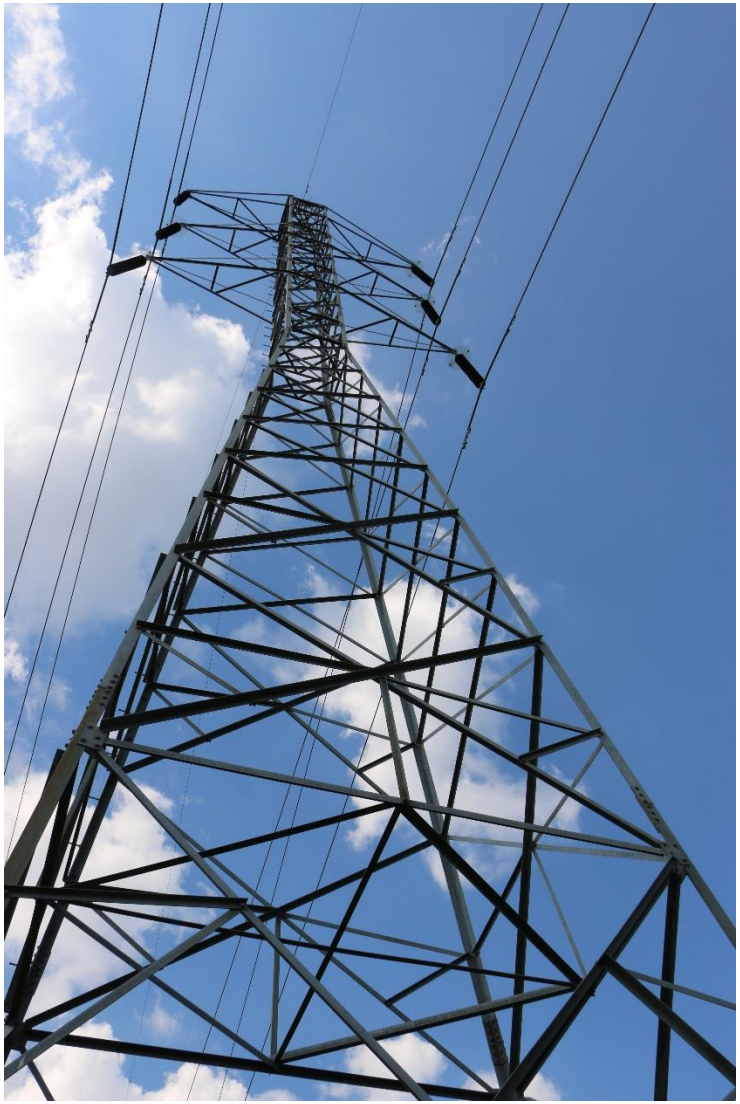
$1.0 M under budget: employee health costs

# 2016 R4 Release Summary

- Release Dates: August 30 – September 1
- 76 Change Requests across the application areas
- NPRRs and SCRs
  - NPRR662:  Proxy Energy Offer Curves
- Majority of the R4 changes are for the following functional areas:
  - Congestion Revenue Rights
  - Current Day Reports
  - Enterprise Information Services
  - EPS Metering
  - Market Information System
  - Market Management System
  - Settlements

# August 2016 Updates

- Summer So Far
- July 7, 2016: EMS Outage & Recovery
- Reliability Must-Run Protocols Review



# 2016 Summer Interns

- 26 students representing 16 universities
- Contributed to 25 different departments across the organization throughout the summer

# 2016 Summer Interns

| Name | University | Dept. |
|---|---|---|
| Reid Lichtenberger | Catawba College, NC | Accounting |
| Harrison Barstad | Embry-Riddle Aeronautical University | Cyber Security |
| Kaitlyn McCullough | Michigan State University | Physical Security |
| David Mulcahy | North Carolina State University | Resource Adequacy |
| Weifeng Li | North Carolina State University | Resource Adequacy |
| Brent Rice | Pennsylvania State University | Load Forecasting & Analysis |
| Zac Silverman | St. Edwards University | Project Management |
| Brice Buccolo | Syracuse University | Corporate Applications |
| Angel Clark | Texas A&M | Transmission Planning |
| Austin Covington | Texas A&M | Operations Planning |
| Channing North | Texas A&M | Procurement |
| Madison Boedeker | Texas A&M | Settlements Metering |
| Mohammad Tasdighi | Texas A&M | Network Modeling |
| Sadegh Modarresi | Texas A&M | Market Analysis |
| Justin Couture | Texas State University | IT Support Services |
| Truett Hull | Texas Tech University | Legal |
| Grace Ekeke | University of Houston | IT Services & Strategy |
| McKenzie Fell | University of North Texas | Treasury |
| Daniel Kinn | UT Austin | Operations Planning |
| Hunter Estes | UT Austin | Electric Vehicle Research |
| Jake Miller | UT Austin | Grid Applications |
| Prasant Kalidindi | UT Austin | Model Administration |
| Zahra Jianpanah | UT Austin | Transmission Planning |
| Shannon Johnson | UT Houston | Environmental Health & Safety |
| Palash Shrestha | UT San Antonio | QA & Testing |
| Kristy Winters | Western Governors University | IT Design & Analysis |

# 2016 Intern Presentations

## David Mulcahy

B.S. Physics

University of North Carolina at Chapel Hill (2012)

Certificate, Energy and the Environment

Duke University (2012)

Ph.D. Electrical Engineering

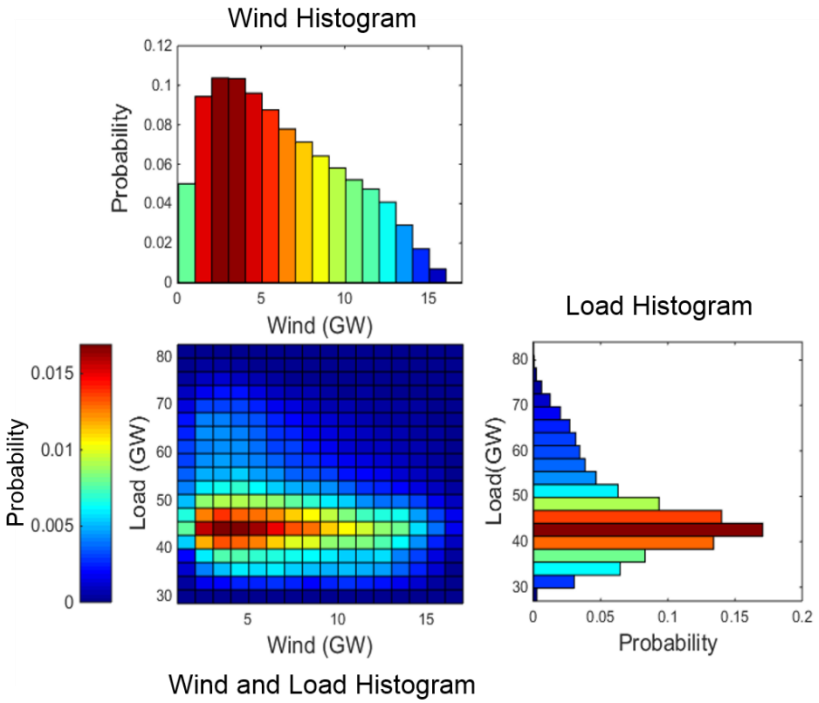
North Carolina State University (expected 2018)

ERCOT Internship

2016 Resource Adequacy

# Probabilistic Transmission Planning

- Developing framework to implement probabilistic planning
- Evaluating and validating software tools
- Collaborating with vendor to improve tools for ERCOT's purposes
- Comparing transmission alternatives using framework and software




Coincident ERCOT Wind Output and Load (2002-2013)

*Performing research with Weifeng Li (Ph.D. intern from NCSU)*

# 2016 Intern Presentations – *cont'd*

## Angel Clark

B.S. Environmental Engineering

University of California San Diego (2013)

M.S. Electrical Engineering (expected 12/2016)

Texas A&M University

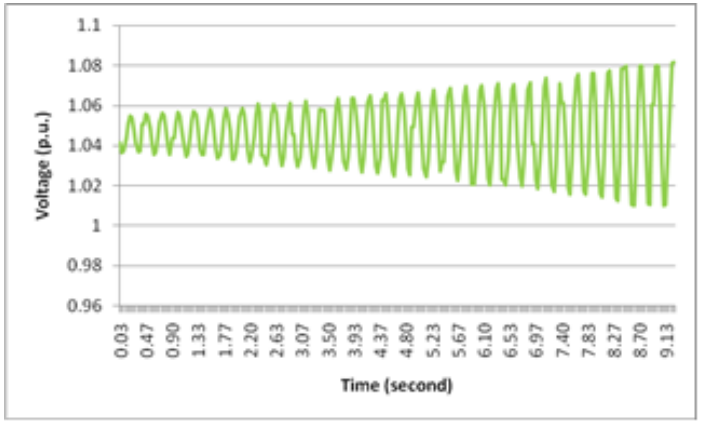
## ERCOT Internships

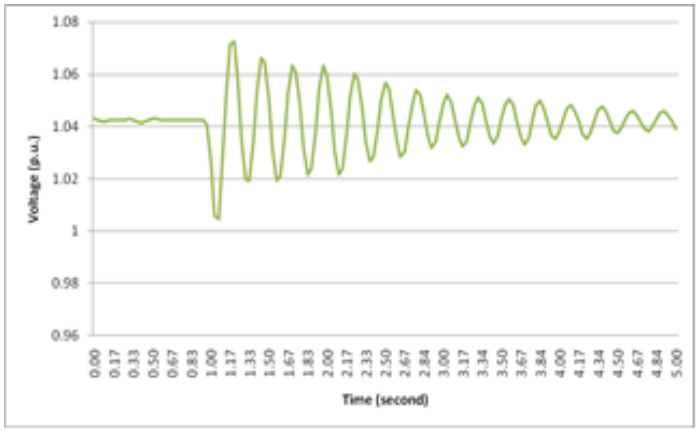
2015 Operations Analysis

2016 Transmission Planning-Dynamic Studies

# Automated Tool for Weak Grid Identification

- High penetration of renewables leads to weak grid conditions that can cause oscillatory response.
- Expected continual growth of renewables in the ERCOT system
- Project objective: Develop automated tool to identify additional areas with weak grid conditions from projected renewable growth.



# Special Recognition – EMS Upgrade Team

## Highlights and Status

- Successful cutover June 16, 2016
- Budget forecast favorable to the $18.9 million estimate
- 170+ employees contributed; 84,000+ hours over four years
- Parallel processing of old and new systems showing expected results
- ERCOT staff and GE (Alstom) together delivered successful upgrade